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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,750

12/02/2003

Akira Hamamatsu

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09/25/2006

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EXAMINER

STAFIRA, MICHAEL PATRICK

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/724,750	<b>Applicant(s)</b> HAMAMATSU ET AL.	
	<b>Examiner</b> Michael P. Stafira	<b>Art Unit</b> 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 9/5/2006.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8 and 11 is/are rejected.
- 7) ☒ Claim(s) 9,10,12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

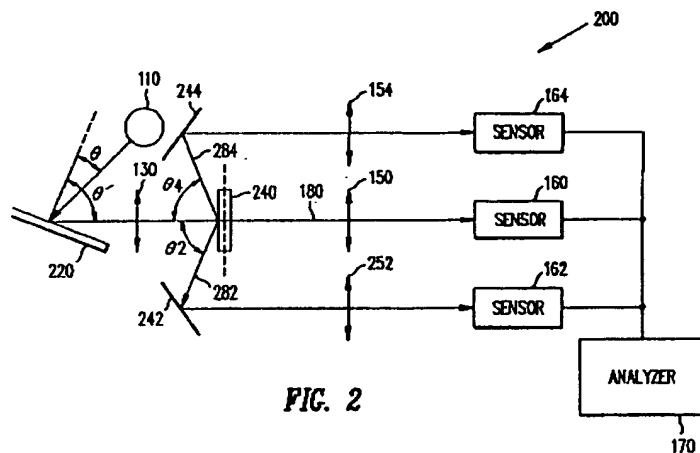
3. Claims 1-2, 4-5, 8, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hendler et al. ('676).

### **Claim 1**

Hendler et al. ('676) discloses illuminating light (Fig. 2, Ref. 110) to an inspection object (Fig. 2, Ref. 220) containing repetitive circuit patterns formed on a surface (See Abstract "integrated circuits"); detecting an image (Fig. 2, Ref. 160, 162, 164) signal corresponding to transmission light by selectively shielding a diffraction light pattern (Fig. 2, Ref. 240) generated from said repetitive circuit patterns when the illuminating light is reflected from the surface of said inspection object (Col. 6, lines 6-42); and detecting the defects existing on the surface of the inspection object by processing the detected image signal (Col. 8, lines 21-39); wherein said

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selective shielding of said diffraction light pattern in said detecting step is performed by a micro-mirror array (Fig. 2, Ref. 240).



## Claim 2

Hendler et al. ('676) further discloses the repetitive circuit patterns comprise a plurality of chips formed on the surface (See Abstract) of the inspection object (Fig. 2, Ref. 2220) and said selective shielding (Fig. 2, Ref. 240) of the diffraction light pattern is performed according to a change of the diffraction light pattern for every area in one chip obtained by detecting diffraction light patterns for one chip as a Fourier transform image (Col. 3-4, lines 62-27).

## Claim 4

Hendler et al. ('676) discloses an illumination optical system (Fig. 2, Ref. 110) which illuminates light to an inspection object (Fig. 2, Ref. 220) containing repetitive circuit patterns formed on the surface thereof (See Abstract); an optical detection system (Fig. 2, Ref. 160, 162, 164) which detects light reflected from said inspection object (Fig. 2, Ref. 220) and transmitted through a shield unit (Fig. 2, Ref. 240), and converts the detected light into an image signal; and a processing system which detects the defects by processing the image signal detected by said

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optical detection system (Col. 6, lines 6-42); wherein said shield unit (Fig. 2, Ref. 240) is provided in said optical detection system (Fig. 2, Ref. 160, 162, 164) to selectively shield diffracted light patterns coming from the repetitive circuit patterns existing on the inspection object (Fig. 2, Ref. 220); and said shielding unit (Fig. 2, Ref. 240) is a micro-mirror array device (Col. 6, lines 20-26).

#### **Claim 5**

Hendler et al. ('676) further discloses an optical observation unit (Fig. 2, Ref. 170) which observes a Fourier transform image as diffraction light patterns for one chip in a Fourier transform plane, and wherein said repetitive circuit patterns comprise a plurality of chips formed on the surface of said inspection object (See Abstract), and said shielding unit (Fig. 2, Ref. 240) selectively shields the diffraction light pattern in accordance with change information of the diffraction pattern for every area in one chip in the diffraction light patterns for one chip obtained by the optical observation unit (Col. 6, lines 20-58).

#### **Claim 8**

Hendler et al. ('676) discloses wherein selective shielding (Fig. 2, Ref. 240) of said diffraction light pattern in said detecting step is performed by using the micro-mirror array device (Fig. 2, Ref. 240) so that each micro-mirror operation of the micro-mirror array device selective shields the diffraction light patterns by reflecting the diffracted light in a direction where a sensor (Fig. 2, Ref. 160, 162, 164) for detecting the image signal corresponding to the transmission light reflected by each micro-mirror operation cannot receive the selective shielding diffracted light patterns (Col. 6, lines 6-58).

**Claim 11**

Hendler et al. ('676) further discloses an optical system wherein each micro-mirror operation of the micro-mirror array (Fig. 2, Ref. 240) device selectively shields the diffraction light pattern by reflecting the diffracted light in a direction where a sensor (Fig. 2, Ref. 160, 162, 164) for the detected light reflected by each micro-mirror operation of the micro-mirror array device (Fig. 2, Ref. 240) into the image signal cannot receive the selective shielding diffracted light patterns (Col. 6, lines 6-58).

***Allowable Subject Matter***

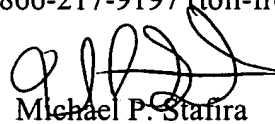
4. Claims 9, 10, 12, 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael P. Stafira  
Primary Examiner  
Art Unit 2877

September 13, 2006